

Bridge Inventory & Structural Preliminary Report For Bridge Replacement Project

**Structure F-81 EB/WB; I-80 over County at Echo Junction Interchange
M.P. 165.81/M.P. 165.23**



Project Manager:

Project Number:

PIN number:

FiNet number:

Fiscal Year:

UDOT

Structures Division

Region 2

Prepared by

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Reviewed by Structures Group: 10/26/2007

DM#: XXXXX

REPORT SUMMARY

Scope of Project:

1. Purpose of Report

This report presents an overview of a project to replace Structures 2F-81 & 4F-81 in Region 2. Structures F-81 carry I-80 over the County Road. This report is intended to convey the need, scope, schedule, budget, safety and quality control process for the project.

2. Project Information

Region: 2 **Route No.:** I-80 **Date:** August 2007

Project Name: Bridge Replacement F-81 EB/WB; I-80 Echo Interchange

R.P.: 165.81 / 165.23

Project Number:

PIN:

FiNet:

Project Design: Bridge: UDOT Structures Division; Region 2 Pre-Construction
Project Mgr:

3. Plan:

- Replace bridges using Self Propelled Modular Transport (SPMT). Existing three span bridges will be replaced with single span bridges using vertical abutments. Upgrade shoulder widths and safety features. The infill of existing median will be evaluated by the Region based on traffic needs. Steel girders are recommended to increase clearance under the bridges and compliment the use of SPMT's.

4. Work items to be completed:

This project will include the following items:

- Remove and replace WB and EB bridges.
- Lower the grade of county road to increase the under clearance.
- Install Safety Upgrades.
- Increase shoulder width of county roads below.
- Relocate any conflicting utilities.
- Improve drainage.
- Landscaping and aesthetics.
- Roadway tie-ins and transitions.
- Traffic control including crossovers.

5. Work items to be deferred:

This project won't include the following items:

- Roadway and safety items beyond what is related to the bridge replacement.

6. Design Exceptions:

No Design Exceptions are expected.

7. Maintenance Considerations:

Include Region 2 Maintenance Station 2438 in the concept development.

8. Construction Considerations:

Limitations of Operations, Incentives, A+B, CMGC will be evaluated.

Consideration for heavy truck traffic will be evaluated. Retaining walls, abutments and foundations will be built in existing slope protection to assist with SPMT methods.

Consideration should be given to access to Echo and nearby recreation areas during construction.

9. Risk Analysis:

Project costs increase as risks increase. Partnering between the owner, designers, suppliers, contractors, is the key to success of the project. The use of innovative contracting methods such as design-build, Construction Management General Contractor (CMGC), will be evaluated.

10. Development Process:

New or Major Reconstruction	<u> x </u>
Rehabilitation	<u> </u>
Preservation	<u> </u>

Schedule of Project:

To get the best quality and bid prices, it is expected that this project needs to be advertised no later than **February 28, 2009**. Design should take approximately one year. A tentative schedule is:

1.	Begin Design Phase	SPRING	2008
2.	Advertisement Date	WINTER	2009
3.	Begin Construction	SPRING	2009
4.	Complete Construction	FALL	2009

Budget of Project:

1.	Funding Source:	Transportation Funds
2.	Amount Programmed	\$ 12,000,000
3.	Cost Estimate:	\$ 11,634,4947

Rapid Bridge Replacement

F-81; I-80 ECHO INTERCHANGE

Item	Quantity	Unit	Unit Cost	Total Cost
Remove bridges using SPMT	1	LUMP		
Replace bridges and App. Slabs using SPMT	4980	SF		
Utilities and Drainage	1	LUMP		
Safety Upgrades	1	LUMP		
Polymer Overlay	9130	SF		
Cast in Place Abutments (esty. Lump qty: 3500 ft2)	1	LUMP		
Bridge Subtotal				\$ 3,986,040.00
Mobilization	1	LUMP		
Traffic Control including Crossovers	1	LUMP		
Roadway tie-ins 200' each end	1	LUMP		
MOT	1	LUMP		
Public Information Services	1	LUMP		
Incentives	1	LUMP		
Project Subtotal				
PE/CE 18%				
Contingency 20%				
Project Total before Inflation				
Inflation Rate @ 7% over 5 Years				
TOTAL PROJECT COSTS				\$ 11,634,496.49

Location Map

